

QUALIFICATION FILE

Stainless Steel Fabricator

- ☐ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship
- ☐ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA
- ☒ General ☒ Multi-skill (MS) ☐ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 5

Submitted By:

< Capital Goods and Strategic Skill Council >
< 39, 1st Floor, Samyak Tower, Pusa Road, New Delhi-110005 >

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Section 1: Basic Details

1	Qualification Name	Stainless Steel Fabricator	
2	Sector/s	Capital Goods and Manufacturing	
3	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: <i>(change to previous, once approved)</i> 2022/CCM/CGSC/06612 V2.0	Qualification Name of existing/previous version: Stainless Steel Fabricator
4	a. OEM Name b. Qualification Name <i>(Wherever applicable)</i>		
5	National Qualification Register (NQR) Code &Version <i>(Will be issued after NSQC approval)</i>	QG-05-CG-03945-2025-V2-CGSSC V3.0	6. NCrf/NSQF Level: 5
7	Award (Certificate/Diploma/Advance Diploma/ Any Other <i>(Wherever applicable specify multiple entry/exits also & provide details in annexure)</i>	Certificate	
8	Brief Description of the Qualification	A Stainless-Steel Fabricator designs, cuts, forms, welds, joins, polishes and finishes the stainless steel structure/component/product as per work requirements. The individual is also	

		responsible for ensuring correct installation of the fabricated structure at the worksite as per required standards.																								
9	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table> <tr> <th>S. No.</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Required Experience (with Specialization - if applicable)</th></tr> <tr> <td>1</td><td>Completed UG Diploma or equivalent</td><td>No Experience required</td></tr> <tr> <td>2</td><td>Completed UG Certificate or equivalent</td><td>1.5 year of relevant experience</td></tr> <tr> <td>3</td><td>12th pass with 2 year of any combination of NTC/NAC/CITS or equivalent</td><td>No Experience required</td></tr> <tr> <td>4</td><td>12th Grade pass</td><td>3-years relevant experience</td></tr> <tr> <td>5</td><td>10th Grade pass</td><td>6-years relevant experience</td></tr> <tr> <td>6</td><td>Previous relevant Qualification of NSQF Level 4.5</td><td>1.5-years relevant experience</td></tr> <tr> <td>7</td><td>Previous relevant Qualification of NSQF Level 4</td><td>3 years relevant experience</td></tr> </table>	S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Completed UG Diploma or equivalent	No Experience required	2	Completed UG Certificate or equivalent	1.5 year of relevant experience	3	12th pass with 2 year of any combination of NTC/NAC/CITS or equivalent	No Experience required	4	12th Grade pass	3-years relevant experience	5	10th Grade pass	6-years relevant experience	6	Previous relevant Qualification of NSQF Level 4.5	1.5-years relevant experience	7	Previous relevant Qualification of NSQF Level 4	3 years relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																								
1	Completed UG Diploma or equivalent	No Experience required																								
2	Completed UG Certificate or equivalent	1.5 year of relevant experience																								
3	12th pass with 2 year of any combination of NTC/NAC/CITS or equivalent	No Experience required																								
4	12th Grade pass	3-years relevant experience																								
5	10th Grade pass	6-years relevant experience																								
6	Previous relevant Qualification of NSQF Level 4.5	1.5-years relevant experience																								
7	Previous relevant Qualification of NSQF Level 4	3 years relevant experience																								

	b. Age: <As per Govt. norms>	
1 Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	19	11. Common Cost Norm Category (I/II/III) (wherever applicable): I
1 Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)		

1 Training Duration by Modes of Training Delivery <i>(Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</i>	☒ Offline ☐ Online ☐ Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>Viva (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>154</td> <td>356</td> <td>60</td> <td>-</td> <td>570</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <i>(Refer Blended Learning Annexure for details)</i>	Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	Viva (Hours)	Total (Hours)	Classroom (offline)	154	356	60	-	570	Online					
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	Viva (Hours)	Total (Hours)														
Classroom (offline)	154	356	60	-	570														
Online																			
1 Aligned to NCO/ISCO Code/s <i>(if no code is available mention the same)</i>	NCO-2015/7123.9900																		
1 Progression path after attaining the qualification <i>(Please show Professional and Academic progression)</i>	Metal Fabrication Engineer L6																		
1 Other Indian languages in which the Qualification & Model Curriculum are being submitted																			
1 Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:																		
1 Is the Job Role Amenable to Persons with Disability	☐ Yes ☒ No If "Yes", specify applicable type of Disability:																		
1 How Participation of Women will be Encouraged	Yes via Industry or College Engagement																		
2 Are Greening/ Environment Sustainability Aspects Covered <i>(Specify the NOS/Module which covers it)</i>	☐ Yes ☒ No																		
2 Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☐ No Colleges ☒ Yes ☐ No																		

2 Name and Contact Details of Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Ridhima Email : technicaladvisors@cgssc.org Website: www.cgssc.org Contact No.: +91-8882907092
2 Final Approval Date by NSQC: 30th April 2025	24. Validity Duration: 3 Years 25. Next Review Date: 30th April 2028

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory Pr.-Practical OJT-On the Job Man.-Mandatory Training Rec.-Recommended Proj.-Project Vi-Viva

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Pr oj.	Viva	Total	Weightage (%) (if applicable)
1.	Bridge Module & Follow the health and safety practices at work	CSC/N1335 NOS Version- 2.0	Non-Core	3	2	25	35	-	-	60	30	70	-	-	100	6
2.	Plan and prepare for stainless steel fabrication	CSC/N0310 Version No. – 2.0	Core	5	2	25	35			60	30	70	-	-	100	7

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Pr oj.	Viva	Total	Weightage (%) (if applicable)
3.	Perform cutting and forming tasks for stainless steel fabrication	CSC/N0311: Version No. – 2.0	Core	5	2	10	50	-	-	60	28	64	-	-	92	5
4.	Perform pre-welding operations for stainless steel fabrication	CSC/N0312: Version No. – 2.0	Core	5	1	10	20	-	-	30	26	74	-	-	100	7
5.	Perform basic Tungsten Inert Gas (TIG) Welding also known as Gas Tungsten Arc Welding (GTAW) Welding	CSC/N0212: Version No. – 2.0	Core	5	3	15	45	30	-	90	30	70	-	-	100	18
6.	Perform finishing and installation of fabricated stainless steel structure	CSC/N0313: Version No. – 2.0	Core	5	3	15	45	30	-	90	36	64	-	-	100	18
7.	Manually weld carbon and low alloy steels by using Metal Arc Welding (MMAW)/ Shielded Metal Arc Welding (SMAW)	CSC/N0204: Version No. – 2.0	Core	5	2	15	45	-	-	60	30	50	-	20	100	17
8.	Manually weld metals by using MIG/MAG welding	CSC/N0209: Version No. – 2.0	Core	5	2	15	45	-	-	60	30	50	-	20	100	17

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
9.	Employability Skills (60 hours)	DGT/VSQ/N 0102- Version No. – 1.0	ES	4	2	24	36	-	-	60	20	30	0	0	50	5
Duration (in Hours) / Total Marks					19	154	356	60		570	260	542	0	0	842	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: 70 % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Diploma in Mechanical/Fitter with 4 years of relevant industry experience specialization in Fitting/Assembly and 2 years of training experience specialization in Fitting/Assembly. B.E/B. Tech in Mechanical with 3 years of relevant industry experience specialization in Fitting/Assembly and 1 year of training experience specialization in Fitting/Assembly.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B. Tech in Mechanical/ Electronics/ Mechatronics with 6 years of relevant experience. M. Tech in Mechanical/ Electronics/ Mechatronics with 4 years of relevant experience.

3.	Tools and Equipment Required for Training	☒ Yes ☐ No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma in Mechanical/Fitter with 3 years of relevant industry experience specialization in Fitting/Assembly and 2 years of assessment experience specialization in Fitting/Assembly B.E/B.Tech in Mechanical with 2 years of relevant industry experience specialization in Fitting/Assembly and 1 year of assessment experience specialization in Fitting/Assembly.
Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B. Tech in Mechanical/ Electronics/ Mechatronics with 6 years of relevant experience. M. Tech in Mechanical/ Electronics/ Mechatronics with 4 years of relevant experience.

	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B. Tech in Mechanical/ Electronics/ Mechatronics with 8 years of relevant experience. M. Tech in Mechanical/ Electronics/ Mechatronics with 4 years of relevant experience.
	Assessment Mode (Specify the assessment mode)	Formative, Summative & Skill Assessment
	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): No
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): No (Industry driven)
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 11
5.	Estimated nos. of persons to be trained and employed: 8819
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors (Mandatory)	Q File
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2.	Annexure: List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Q File
3.	Annexure: Detailed Assessment Criteria (Mandatory)	Q File
4.	Annexure: Assessment Strategy (Mandatory)	Q File
5.	Annexure: Blended Learning (Mandatory, in case selected Mode of delivery is "Blended Learning")	NA
6.	Annexure: Multiple Entry-Exit Details (Mandatory, in case qualification has multiple Entry-Exit)	NA
7.	Annexure: Acronym and Glossary (Optional)	Available
8.	Supporting Document: Model Curriculum (Mandatory – Public view)	Attached
9.	Supporting Document: Career Progression (Mandatory - Public view)	Attached
10.	Supporting Document: Occupational Map (Mandatory)	Attached
11.	Supporting Document: Assessment SOP (Mandatory)	Available in QP
12.	Any other document you wish to submit:	NA

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	Job that requires well developed skills with clear choice of procedures in familiar context - identify the application for which stainless steel structure is to be fabricated - identify project requirements by accurately interpreting the design drawings	The Stainless Steel Fabricator requires well developed skills with clear choice of procedures. Refer to the evidences provided in the adjacent column. Hence it falls under level 5.	5

	• evaluate the feasibility of the structure to be fabricated with respect to manpower, machine, materials, method and other miscellaneous factors • determine the process flow and sequence of operations to be performed for fabrication • identify the type of cutting method/s to be used for the stainless steel workpiece and the related application/s • select the correct direction and optimal cutting speed as per industry work practices for producing the required level of finishing on the workpiece • ensure that the tools used during forming are not contaminated • ensure that there are no loose wires when working with electrical machinery • ensure correct dilution levels and composition of filler metal with base material • deal promptly and effectively with problems within own control, and seek timely and appropriate help and guidance from		
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	relevant personnel where required		
Professional and Technical Skills/ Expertise/ Professional Knowledge	Knowledge of facts, principles, processes and general concepts in the field of work or study • elements of preparation for stainless steel fabrication • procedure followed to interpret the work instructions from project documents and concerned personnel • types of applications of stainless steel • importance of designs and drawings in the fabrication process • various applications of stainless steel • types of cutting techniques suitable to be used for stainless steel • importance of proper marking in cutting of stainless steel • industry approved tools and machinery to be used for cutting • measurements and estimations used in cutting • properties of various grades of stainless steel • various applications of stainless steel	The Stainless Steel Fabricator should have knowledge of facts, principles, processes and general concepts in the field of work or study. Refer to the evidences provided in the adjacent column. Hence it falls under level 5.	5

	• considerations for selecting a filler rod with required alloy content • applications of manual metal arc welding • effects of exposure to the electric arc • types of fire extinguishers and their suitable uses • effects of exposure to welding fume • methods of managing welding fume hazards • different types of power source • basic principles of TIG welding and functions of welding equipment • the types of fire extinguishers and their suitable uses in case of welding • related fires • concepts and mechanisms of welding		
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	A range of cognitive and practical skills required to accomplish task and solve problems by selecting and applying basic methods, tools, materials and information • identify the application for which stainless steel structure is to be fabricated • identify project requirements by accurately interpreting the design drawings	The Stainless Steel Fabricator should possess a range of cognitive and practical skills required to accomplish task and solve problems by selecting and applying basic methods, tools, materials and information.	5

	• identify the type and grade of stainless steel to be used in the fabrication process • determine the materials, parts or equipment required for the fabrication process • determine the process flow and sequence of operations to be performed for fabrication • customise the design as per local conditions, customer and site requirements • ensure that the tools used during forming are not contaminated • use appropriate backing technique for stainless steel to avoid crevices, voids and oxidation • identify various weld defects, use appropriate methods and equipment to • check the quality, and that all dimensional and geometrical aspects of the weld are to the specification • detect surface imperfections and deal with them appropriately	Refer to the evidences provided in the adjacent column. Hence it falls under level 5.	
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	• detect equipment malfunctions and deal with them safely and as per • organisation procedures • select and use tools and equipment such as fillet gauges, calculators, • measuring tapes, squares and straight edges		
Broad Learning Outcomes/Core Skill	Desired mathematical skills • prepare bill of materials (BoM) specifying the type, quantity and nature/ grade of materials as per task requirements • mark the cutting line/s as per correct measurement and estimation using prescribed material • cut bulk materials into appropriate work pieces using right machinery and standard industry tools • perform drilling using stainless steel specified drill bits at right angles, applying adequate pressure and maintaining a steady speed • perform abrasive cutting using appropriate discs for cut-off operations on small section sizes, thin plate material and applications involving straight-line cutting	The Stainless Steel Fabricator should have desired mathematical skills with the understanding of social political and some skill of collecting and organizing information. The individual should also have good communication skills. Refer to the evidences provided in the adjacent column. Hence it falls under level 5.	5

	Understanding of social political and some skill of collecting and organizing information • obtain purchase order from the customer/relevant authority as per standard operating procedure • assemble the fabricated components as per design drawings and specifications Communication • communicate the work instructions to the team as per organisational protocols • communicate the guidelines to be followed for the upkeep of the stainless steel structure/s to the customer • demonstrate rescue techniques applied during fire hazard • demonstrate good housekeeping in order to prevent fire hazards demonstrate the correct use of a fire extinguisher		
Responsibility	Responsibility for own work and learning and • adhere to industry standards and regulations during the entire fabrication process • check the machinery such as punches and dies for adequate strength and rigidity to	The Stainless Steel Fabricator should take responsibility for own work and learning and some responsibility for the work and learning of the fitters, welders	5

	form the stainless steel metal into the required shape • ensure that the tools used during forming are not contaminated • ensure that there are no loose wires when working with electrical machinery • check to ensure that the chemistry of final weld deposit is compatible with each side of the weld joint • deal with any faults or differential as per laid procedures • deal promptly and effectively with problems within their control • check the condition of welding leads, gas connection arrangements, earthing arrangements and electrode holder • shut down and make safe the welding equipment on completion of the welding activities Some responsibility for others work and learning • Perform installation of the fabricated structure in co-ordination with support team	and helpers working under him/her. Refer to the evidences provided in the adjacent column. Hence it falls under level 5.	
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	- ensure unpacking of the fabricated structures, tools, materials and other related equipment as per manufacturer instructions and industry-defined SOP - assemble the parts and/or structures to be installed at the worksite in co-ordination with installation team - ensure accurate installation by ensuring proper alignment and levelling of the fabricated structure provide instructions and guidelines for the upkeep of the stainless steel structure/s to the user/customer		
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Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 20-25 Nos

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Chairs/Tables	Standard	25

2	Computer with internet	Standard	25
3	LCD projector with screen	Standard	1
4	Trainer chair and Table	Standard	1
5	Demonstration table pin up boards	Standard	1
6	White board with marker	Standard	1
7	Measuring Instruments	Linear Measuring Instruments, Speed Measuring Devices, Multimeter, Continuity Tester, Pressure Testing Devices, Flow Testing Devices	1 Each
8	Mechanical Tools	Spanners, Wrenches, Crow Bars, Torque Wrenches, Engineer's Level, Alignment Telescope	1 Each
9	Machine Vice	Standard	1
10	Angle Plate	Standard	1
11	TIG welding set	Standard	1
12	Fire Extinguisher	Standard	1
13	Safety Gloves (Rubber)	Standard	25
14	Ear Plugs	Standard	25
15	Safety Shoes & Helmet	Standard	25
16	Goggles	Standard	25
17	First-Aid Kit	Standard	2

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Computer / Laptop
2. Whiteboard and marker
3. Projector

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Wangfeng Aluminium Wheel (India) Pvt. Ltd.	Sanjeev Chaudhary	HR Head	Plot No. 15 to 18, Sec-8, Industrial Model TWP, Bawal, Haryana - 123501	8750231400		
2	Palak Plastic Pvt.Ltd.	Hem Chander Yadav	Director	Plot No. 25, Sec-3, Phase 1, IMT,	0124-4019506	palakplastic@gmail.com	

				Bawal, Rewari, Haryana - 123501			
3	Hay Industry	Harshit Yadav	HR Head	504/4, Gali No. 4, Near Rajendra Hospital, Om Nagar, Gurugram, Haryana-122001	9212154114	industryhay@gmail.com	
4	AG Enterprises	Durgesh Gupta	Manager -HR	Room No. 1,2 nd Floor, Plot No. 345, Sector-08, IMT, Manesar, Gurugram Haryana -122051	8750279555	bd@agenterpriseshr.com	
5	Hans Enterprises	OP Yadav	Sr. OP Manager	Cyberwalk, Plot No. CP 9, Tower E, GF, Cabin No4, Sec-5, IMT, Manesar, Gurugram Haryana	8750801333	Enterprisesans@gmail.com	
6	Palak Plastic Pvt.Ltd.	Sunil Kumar	Director	Plot No.345, Sec-8, IMT, Manesar, Gurugram Haryana-122051	9810075433	sunilyadav7143@gmail.com	
7	Revent	Krishnakant Shukla	DGM-Training	Forging Division, unit 2nd, Begumpur, Khataula, Post Office-Khandsa,, Gurugram , Haryana-122004	9262708933	Krishnakant.shukla@reventengineering.com	
8	Sudhir Foundation	Ravi Prakash	DGM-Training	Plot No.93, Sector-8, IMT, Manesar, Gurugram , Haryana-122051	7988101508	965sudhirfoundation@gmail.com	
9	JBM Group	Rajeev Kumar Sharma	VP-Head Skill Development – JBM Group	JBM Auto Limited, Skill Development Centre, Plot No.16, sector-20B, Faridabad, (Haryana)- 121007	8860281177	Rajeev.sharma@jbmgroupp.com	

10	Subros	Pawan Yadav	HR Head	Plot No. 395-396, Sec-8, Phase-3, IMT Manesar, Gurugram, - 122050	9818148609	p.yadav@subros.com	
11	Texmaco	Rajeev Gupta	Chief Business Officer	Belgharia,24 Parganas(North), Kolkata-700056	7042644994	Rajeev.gupta@texmaco.in	

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
FY2025-2026	2400	0	240	0	24	0
FY2026-2027	2640	0	264	0	26	0
FY2027-2028	2904	0	290	0	29	0

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
	FY2022-2023	0	0	0	0	0	0	0	0	0	0	0	0
	FY2023-2024	82	82	82	57	8	8	5	1	1	1	1	1
	FY2024-2025	2182	0	0	0	218	0	0	0	22	0	0	0

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1. PMKVY 4.0 CSM STT
2. Non PMKVY
3. TNSDC
4. Fee Based
5. NABARD
6. MSSDS
7. GSDM
8. SDIS Orissa State Skilling Scheme
9. NULM
10. SDIS DDU GKY

Content availability for previous versions of qualifications: PH

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available: No

NSQC Approved

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

CSC/N1335: Use basic health and safety practices at the workplace

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Health and safety</i>	21	32	-	-

PC1. use protective clothing/equipment for specific tasks and work conditions (Protective clothing: leather or asbestos gloves, flame proof aprons, flame proof overalls buttoned to neck, cuffless (without folds), trousers, reinforced footwear, helmets/hard hats, cap and shoulder covers, ear defenders/plugs, safety boots, knee pads, particle masks, glasses/goggles/visors Equipment: hand shields, machine guards, residual current devices, shields, dust sheets, respirator)	1	3	-	-
PC2. state the name and location of people responsible for health and safety in the workplace	1	2	-	-
PC3. state the names and location of documents that refer to health and safety in the workplace	1	2	-	-

PC4. identify job-site hazardous work and state possible causes of risk or accident in the workplace (Hazards: sharp edged and heavy tools; heated metals; oxyfuel and gas cylinders; welding radiation; hazardous surfaces(sharp, slippery, uneven, chipped, broken, etc.); hazardous substances(chemicals, gas, oxy-fuel, fumes, dust, etc.); physical hazards(working at heights, large and heavy objects and machines, sharp and piercing objects, tolls and machines, intense light, load noise, obstructions in corridors, by doors, blind turns, noise, over stacked shelves and packages, etc.) electrical hazards (power supply and points, loose and naked cables and wires, electrical machines and appliances, etc.) Possible causes of risk and accident: physical actions; reading; listening to and giving instructions; inattention; sickness and incapacity (such as drunkenness); health hazards (such as untreated injuries and contagious illness))	2	3	-	-
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PC5. carry out safe working practices while dealing with hazards to ensure the safety of self and others (Safe working practices: using protective clothing and equipment; putting up and reading safety signs; handle tools in the correct manner and store and maintain them properly; keep work area clear of clutter, spillage and unsafe object lying casually; while working with electricity take all electrical precautions like insulated clothing, adequate equipment insulation, use of control equipment, dry work area, switch off the power supply when not required, etc.; safe lifting and carrying practices; use equipment that is working properly and is well maintained; take due measures for safety while working in confined places, trenches or at heights, etc. including safety harness, fall arrestors, etc.)	2	2	-	-
PC6. state methods of accident prevention in the work environment of the job role (Methods of accident prevention: training in health and safety procedures; using health and safety procedures; use of equipment and working practices (such as safe carrying procedures); safety notices, advice; instruction from colleagues and supervisors)	2	1	-	-
PC7. state location of general health and safety equipment in the workplace (General health and safety equipment: fire extinguishers; first aid equipment; safety instruments and clothing; safety installations(eg fire exits, exhaust fans))	2	3	-	-

PC8. inspect for faults, set up and safely use steps and ladders in general use (Ladder faults: corrosion of metal components, deterioration, splits and cracks timber components, imbalance, loose rungs, missing/ unfixed nuts or bolts, etc.) (Ladders set up: firm/level base, clip/lash down, leaning at the correct angle, etc.)	2	3	-	-
PC9. work safely in and around trenches, elevated places and confined areas	2	3	-	-
PC10. lift heavy objects safely using correct procedures	2	2	-	-
PC11. apply good housekeeping practices at all times (Good housekeeping practices: clean/tidy work areas, removal/disposal of waste products, protect surfaces)	2	3	-	-
PC12. identify common hazard signs displayed in various areas (Various areas: on chemical containers; equipment; packages; inside buildings; in open areas and public spaces, etc.)	1	2	-	-

PC13. retrieve and/or point out documents that refer to health and safety in the workplace (Documents: fire notices, accident reports, safety instructions for equipment and procedures, company notices and documents, legal documents (eg government notices))	1	3	-	-
<i>Fire safety</i>	4	10	-	-
PC14. use the various appropriate fire extinguishers on different types of fires correctly (Types of fires: Class A: eg. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: eg. electrical equipment such as appliances, wiring, breaker panels, etc. (These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no longer receiving electricity); Class D: combustible metals such as magnesium, titanium, and sodium (These fires burn at extremely high temperatures and require special suppression agents))	1	2	-	-
PC15. demonstrate rescue techniques applied during fire hazard	1	2	-	-

PC16. demonstrate good housekeeping in order to prevent fire hazards	1	3	-	-
PC17. demonstrate the correct use of a fire extinguisher	1	3	-	-
<i>Emergencies, rescue and first-aid procedures</i>	9	20	-	-
PC18. demonstrate how to free a person from electrocution	1	3	-	-
PC19. administer appropriate first aid to victims where required eg. in case of bleeding, burns, choking, electric shock, poisoning etc.	1	2	-	-
PC20. demonstrate basic techniques of bandaging	1	2	-	-
PC21. respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments	1	2	-	-
PC22. perform and organize loss minimization or rescue activity during an accident in real or simulated environments	1	2	-	-

PC23. administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases	1	2	-	-
PC24. demonstrate the artificial respiration and the CPR Process	1	2	-	-
PC25. participate in emergency procedures (Emergency procedures: raising alarm, safe/efficient, evacuation, correct means of escape, correct assembly point, roll call, correct return to work)	1	3	-	-
PC26. complete a written accident/incident report or dictate a report to another person, and send report to person responsible (Incident Report includes details of: name, date/time of incident, date/time of report, location, environment conditions, persons involved, sequence of events, injuries sustained, damage sustained, actions taken, witnesses, supervisor/manager notified)	1	2	-	-
<i>Emergencies, rescue and first-aid procedures</i>	2	2	-	-
PC27. demonstrate correct method to move injured people and others during an emergency	2	2	-	-

NOS Total	36	64	-	-
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CSC/N0310: Plan and prepare for stainless steel fabrication

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan and prepare for stainless steel fabrication</i>	30	70	-	-
PC1. obtain and customize the designs/sketches/drawings/purchase order, to ensure compliance to local conditions, customer and site requirements (Local conditions: e.g. natural drainage, natural cleaning, allows easy reach and access)	3	7	-	-
PC2. identify project requirements by accurately interpreting the CAD drawings and drawing conclusions from sketches	3	8	-	-

PC3. determine the materials, parts, equipment, method and environmental conditions that affect the properties of the fabricated structure and evaluate the feasibility of the structure to be fabricated	3	8	-	-
PC4. identify the type and grade of stainless steel to be used in the fabrication process (Types of stainless steel: austenitic, duplex, ferritic, martensitic, etc.) (Grades of stainless steel: 200,300 and 400 etc. series of stainless steel)	3	7	-	-
PC5. perform measurements at the worksite using correct tools and materials for stainless steel fabrication	3	8	-	-
PC6. determine the process flow and sequence of operations to be performed for fabrication	4	8	-	-
PC7. plan the tasks, and allocate work to be performed as per the project timelines and requirements	3	8	-	-

PC8. prepare bill of materials (BoM) specifying the type, quantity and nature/grade of materials as per task requirements and submit to the concerned department or vendor (Bill of Materials (BoM): part number; description of materials/parts such as size, thickness, length; number of sets; quantity per set; type of operation; weight, rate etc)	4	8	-	-
PC9. design a single-angle truss and use T-sections as per application and site requirements	4	8	-	-
NOS Total	30	70	-	-

CSC/N0311: Perform cutting and forming tasks for stainless steel fabrication

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for cutting of stainless steel</i>	10	25	-	-

PC1. identify the type of cutting method/s to be used for the stainless steel workpiece and the related application/s	1	4	-	-
PC2. mark the cutting line/s as per measurement and estimates using prescribed material	2	4	-	-
PC3. clamp or secure the sheet to ensure perfect cut as per required setup and machinery	2	4	-	-
PC4. cut bulk materials into appropriate work pieces using right machinery and standard industry tools (Standard industry tools: CNC machines, handheld machines, cutting wheels, rotary tools)	2	5	-	-
PC5. obtain First Part Approval (FPA) from the supervisor for the first part cut as per standard operating procedure	1	4	-	-
PC6. perform drilling using stainless steel specified drill bits at right angles, applying adequate pressure and maintaining a steady speed (Drilling: machining (turning, facing); hole drilling, threading, tapping) (Stainless steel specified drill bits: high-speed drill bits, carbide bits etc.)	2	4	-	-
<i>Shear stainless steel</i>	4	8	-	-

PC7. select and use manual shears and shearing machines for cutting stainless steel sheets as per the grade and thickness of Stainless steel sheet/plate (Shears: guillotine shears and swing-type shears) (Shearing machines: Hydraulic shearing machine; mechanical shearing machine (upper drive and lower drive))	2	4	-	-
PC8. set the shears, adjust for blade clearance and derate the shears against their nominal capacity to compensate for the power requirements as per the thickness of stainless steel (Blade clearance: depends on plate thickness and material strength)	2	4	-	-
<i>Perform abrasive cutting</i>	2	5	-	-
PC9. perform abrasive cutting using appropriate discs for cut-off operations on small section sizes, thin plate material and applications involving straight-line cutting (Discs: aluminium oxide discs, rubber-based discs, vitrified/resinous-bonded discs, dedicated discs)	2	5	-	-
<i>Form stainless steel</i>	8	19	-	-
PC10. use a hydraulic bending machine for bending of stainless steel sheets/pipes by applying adequate pressure and as per application requirements	2	5	-	-

PC11. use manual bending technique by applying adequate pressure to form the required shape and nature of application (Nature of application: pipe, sheet, solid section etc.)	2	5	-	-
PC12. apply pressing/stamping technique using appropriate tool and die punches to provide the required shape (Pressing technique: punching, blanking, bending, embossing and flanging)	2	5	-	-
PC13. cut the workpiece into appropriate blanks	2	4	-	-
<i>Adhere to industry work practices</i>	6	13	-	-
PC14. cut stainless steel workpiece using plasma cutting and laser cutting techniques in coordination with concerned personnel	2	5	-	-
PC15. remove the chips and bursts completely after cutting operations to avoid gaps between joints (Chips and bursts: deburring; adjustment of fitments, hand files, rotating machine, hand tools (such as grinder))	2	4	-	-

PC16. use an appropriate industry accepted lubricant for blanking, piercing and punching and rotating parts of machinery used in stainless steel fabrication (Lubricant: Emulsifiable chlorinated waxes/oils, wax based pastes, soluble oils, or soap plus borax)	2	4	-	-
NOS Total	30	70	-	-

CSC/N0312: Perform pre-welding operations for stainless steel fabrication

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform pre-welding operations for stainless steel fabrication</i>	28	64	-	-
PC1. select a weld procedure/technique that allows minimum penetration of weld metal into carbon (steel and adequate fusion (Weld procedure/technique: tungsten inert gas (TIG) welding; metal inert gas (MIG) welding, shielded metal arc welding (SMAW))	-	-	-	-
PC2. select a filler rod with required alloy content as per the type of weld, properties of the weld metal and grade of stainless steel being used (Properties of the weld metal: corrosion-resistance, strength of the material, chemical composition)	2	6	-	-

PC3. bevel and provide slopes at the edge of stainless steel plate as per task requirements	3	7	-	-
PC4. clean the weld surface thoroughly to avoid contamination that could result in hot cracking (Methods for cleaning the weld surface: using industry approved cleaning solution such as acetone or a chloride free cleaner; manual cleaning using steel wire brush, stainless steel wool or a chemical solvent; vapour degreasing or tank cleaning for large assemblies; single/multiple swipes as per need)	3	7	-	-
PC5. clamp or secure the stainless steel plate/sheet tightly to ensure accurate welding as per task requirements	3	6	-	-
PC6. set the amperage machine at the required temperature as per type of welding and scope of application	2	6	-	-
PC7. perform tacking to ensure proper jointing of the structures to be fabricated	3	7	-	-
PC8. ensure correct dilution levels and composition of filler metal with base material	3	6	-	-

PC9. apply appropriate backing technique for stainless steel to avoid crevices, voids and oxidation using copper, aluminium, argon (in GTAW) and/or nitrogen	3	7	-	-
PC10. maintain the carbon steel dilution of the stainless steel weld metal to a minimum	3	6	-	-
PC11. wear appropriate personal protective equipment (PPE) while working for stainless steel fabrication	3	6	-	-
NOS Total	28	64	-	-

CSC/N0212: Perform basic Tungsten Inert Gas (TIG) Welding also known as Gas Tungsten Arc Welding (GTAW) Welding

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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<i>Work Safely</i>	1	4	-	-
PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	1	2	-	-
PC2. take necessary safety precautions for TIG welding operations	-	2	-	-
<i>Prepare for welding operations</i>	10	29	-	-

PC3. interpret weld procedure data sheets specifications interpreting the WPS: welding process (ISO Codes); parent metal; consumables; pre welding joint preparation (cleaning, edge preparation, assembly, pre-heat); welding parameters; welding positions (EN ISO 6947 PA, PB, PC, PD, PE, PF, PG; ASME IX I-6 G/1-6 F); number and arrangement of runs to fully fill/weld joints; electrode (W); filler wire; electrical conditions required (type of current, alternating [A.C.] direct [D.C.], electrode polarity (negative), welding current ranges; methods of arc ignition (scratch, high frequency, lift start); shielding gas (type, flow rate, pre-weld gas flow, post weld gas flow); techniques (including autogenous); control of heat input; interpass/run cleaning/back gouging methods; root pass with back purging of gases on the root side of the welding; post welding activities (wiring brushing, removal of excess weld metal where required); post-weld heat treatment (normalising, stress relief)	1	2	-	-
PC4. check that all measuring equipment is within calibration date	-	2	-	-
PC5. check if welding machines e.g.. transformer, inverters (AC/DC), rectifiers and generators have been made available by the authorized person	1	1	-	-

PC6. check if welding torch, tungsten electrode and filler wire have been made available by the authorized person	1	1	-	-
PC7. prepare for the TIG welding process	1	1	-	-
PC8. prepare the materials and joint in readiness for welding (Material and joint preparation: made rust free; cleaned free from scaling, paint, oil/grease; chemical cleaning; made dry and free from moisture; edges to be welded prepared as per job requirement (e.g.. flat, square or bevelled); use various machines and techniques for the above (e.g.. chamfering machine, grinding and stripping, etc.); correctly positioned (Positioning: devices and techniques; jigs and fixtures; setting up the joint in the correct position and alignment)	-	2	-	-
PC9. fit the welding shielding gases given by the authorised person, for a range of given applications	-	2	-	-
PC10. plan the welding activities before they start them effectively and efficiently for achieving specifications as per WPS (Activities checks: correct set-up of the joint; proper condition of electrical connections; welding return and earthing arrangements; operating parameters)	-	2	-	-

PC11. connect torches and the components (Torch components: cables, water carrying tubes, ceramic nozzle, collet, collet holder, gas lens, teflon washers, bakelite cap, ceramic shields/nozzles)	-	2	-	-
PC12. connect and adjust regulators and flow meters to cylinders	1	2	-	-
PC13. read, set and adjust current (amperage) as required	1	2	-	-
PC14. set pre-purge with shielding gas as required	1	1	-	-
PC15. prepare tungsten by sharpening or balling it to desired tip shape	1	2	-	-
PC16. set and verify gas flow rates	1	1	-	-
PC17. prepare and support the joint, using the appropriate methods	1	2	-	-
PC18. tack weld the joint at appropriate intervals, and check the joint for accuracy before final welding	-	2	-	-
PC19. match feed and travel speed as required	-	2	-	-
<i>Carry out welding operations</i>	10	26	-	-

PC20. perform TIG welding operations using appropriate welding techniques to meet welding procedure specification requirements (Welding techniques: fine adjustment of parameters (current and gas flow); selection of gas nozzle if required; selection of the outer nozzle; correct manipulation of the torch; blending in stops/starts and tack welds; starting techniques)	1	4	-	-
PC21. use correct technique for starting the arc (using HF (high frequency) unit, scratching the electrode on the job material, lifting the electrode immediately after touching the job material)	2	2	-	-
PC22. use correct angle of torch and filler wire	1	3	-	-
PC23. weld the joint to the specified quality, dimensions and profile	1	3	-	-
PC24. use manual welding and related equipment, to carry out TIG welding processes	1	3	-	-

PC25. produce joints of the required quality and of specified dimensional accuracy which achieve a weld quality equivalent to Level B of ISO 5817 (Weld quality check standards: required parameters for dimensional accuracy; weld finishes are built up to the full section of the weld; joins at stop/start positions merge smoothly; weld surface is (free from cracks; substantially free) from porosity; free from any pronounced hump or crater; substantially free from shrinkage cavities; substantially free from arcing or chipping marks); fillet welds are: equal in leg length, slightly convex in profile (where applicable), size of the fillet equivalent to the thickness of the material welded; weld contour is (of linear and of uniform profile; smooth and free from excessive undulations; regular and has an even ripple formation); welds are adequately fused, and there is minimal undercut, overlap and surface inclusions; tack welds are blended in to form part of the finished weld, without excessive hump; corner joints have minimal burn through to the underside of the joint or, where appropriate	1	3	-	-
PC26. use both methods to produce the various joints a) with filler wire b) without filler wire (autogenously)	2	2	-	-

PC27. produce joints from various materials in different forms (Materials: carbon steel, low alloy steel; Forms: sheet (less than 1.5 mm), plate (8 mm), pipe/tube)	-	2	-	-
PC28. weld joints in good access situations, in select positions	1	2	-	-
PC29. make sure that the work area is maintained and left in a safe and tidy condition	-	2	-	-
<i>Test for quality</i>	5	11	-	-
PC30. use appropriate methods and equipment to check the quality, and that all dimensional and geometrical aspects of the weld are to the specification	2	2	-	-
PC31. check that the welded joint conforms to the specification, by checking various quality parameters using visual inspection (Quality parameters: dimensional accuracy; alignment/squareness; size and profile of weld; visual defects; NDT/DT tested defects; Types of visual inspections: use of visual techniques, lighting, low powered magnification, fillet weld gauges, usage at temperature chalk)	1	2	-	-

PC32. identify various weld defects (Types of weld defects: lack of continuity of the weld ; uneven and irregular ripple formation; incorrect weld size or profile; undercutting; overlap; inclusions; porosity; internal cracks; surface cracks; lack of fusion; lack of penetration; welding spatter; gouges; stray arc strikes; sharp edges)	1	2	-	-
PC33. detect surface imperfections and deal with them appropriately	1	1	-	-
PC34. report any defect or imperfection identified to the authorised person	-	2	-	-
PC35. shut down and make safe the welding equipment on completion of the welding activities	-	2	-	-
<i>Deal with contingencies</i>	-	4	-	-
PC36. detect equipment malfunctions and deal with them appropriately	-	2	-	-
PC37. deal promptly and effectively with problems within their control, and seek help and guidance from the relevant people if they have problems that they cannot resolve	-	2	-	-
NOS Total	26	74	-	-

CSC/N0313: Perform finishing and installation of fabricated stainless steel structure**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Finish stainless steel structures</i>	19	45	-	-
PC1. assemble the fabricated components as per design drawings and specifications	2	5	-	-
PC2. inspect the welded joints in the fabricated structure to check for welding imperfections	2	5	-	-

PC3. clean the weld area using mechanical, chemical and other standard cleaning methods as per standard operating procedure (SOP)	2	5	-	-
PC4. use flapper wheel abrasives for deburring and finishing the fabricated structures	2	5	-	-
PC5. apply relevant treatment techniques in the areas of hot weld deposit to restore the full passivity and corrosion resistance of the weld	3	5	-	-
PC6. test the weldments and their tensile strength using appropriate techniques	2	5	-	-
PC7. perform buffing to smoothen the surface of the workpiece and ensure fine finishing as per the required application	2	5	-	-
PC8. operate appropriate grinding and polishing equipment to achieve desired finishing on the structure	2	5	-	-
PC9. dispatch the fabricated structure as per standard practice and/or organisational SOP	2	5	-	-
<i>Install fabricated structures</i>	6	15	-	-
PC10. check if the site ready for installation	2	5	-	-

PC11. assemble and join the parts and/or structures to be Installed at the worksite in co- ordination with installation team	2	5	-	-
PC12. erect, align and level the stainless steel structure/s	2	5	-	-
<i>Perform post installation activities</i>	5	10	-	-
PC13. provide instructions and guidelines for the upkeep of the stainless steel structure/s to the user/customer	3	5	-	-
PC14. secure and maintain the fabrication equipment and machinery	2	5	-	-
NOS Total	30	70	-	-

CSC/N0204: Manually weld carbon and low alloy steels by using Metal Arc Welding (MMAW)/ Shielded Metal Arc Welding (SMAW)

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for welding operations</i>	13	19	-	7
PC1. identify the work to be done and product specifications by interpreting the product drawing, Welding Procedure Specification (WPS) and job orders	1	2	-	1
PC2. identify the tools, welding machines, measuring instruments, accessories, consumables and input materials (i.e. carbon, low alloy steel etc.) as per the requirements mentioned in WPS or drawing	3	2	-	2
PC3. select and arrange the right material, equipment, fixtures, accessories, welding torch and consumables i.e. electrode, filler wire, shielding gas etc. as per the SOP and job requirements	2	3	-	1
PC4. check the input material, tools and equipment for any defects and that they are as per the required quality standards	2	4	-	1
PC5. prepare the work area for the welding activities	1	1	-	-

PC6. prepare the materials (i.e. plate(1.5 - 24mm)/ sheet (1.5mm)) and joint for welding process	1	1	-	1
PC7. set the MMAW machine and its parameters as per the WPS and SOP	1	2	-	1
PC8. re-dry electrodes as per electrode classification requirement	1	1	-	-
PC9. install the work pieces and fixture on the apparatus and align them with the electrodes as per the job requirements	1	2	-	-
PC10. verify set up by running test weld specimen (scrap plate)	-	1	-	-
<i>Perform MMAW/SMAW operations</i>	11	20	-	8
PC11. follow safety precautions during welding work as per SOP and organizational guidelines	-	1	-	-
PC12. start the MMAW machine for welding operations	1	2	-	-
PC13. strike and maintain a stable arc by applying correct technique (i.e. scratch start, tapping techniques) and to avoid welding defects	1	2	-	1

PC14. perform MMAW welding process as per SOP and tack weld the joint at appropriate intervals to produce joints of the specified quality, dimensions and profile	2	4	-	2
PC15. produce fillet and grove joints in 1F/1G, 2F/2G and 3F/ 3G welding positions as specified in WPS by using single or multi-run welds	2	4	-	2
PC16. ensure correct angle of torch, travel speed, direction of weld and feed during the welding operation	1	1	-	1
PC17. maintain proper bead sequence with respect to groove/fillet configurations and positions	-	1	-	-
PC18. monitor the welding process parameters (air pressure, electrode force, electrode distance, gas flow etc.) are within standards by reading the various gauges and correct them if not within standards	1	1	-	1
PC19. measure the final welded piece and compare with the dimensional and geometrical aspects of the weld as prescribed in the WPS and engineering drawing	1	1	-	1

PC20. remove extra material, slag etc. by using brush, chipping hammers, grinders etc., from the welded piece	1	1	-	-
PC21. hammer the work piece to get the desired shape, if there are any welding bulges/distortions	1	1	-	-
PC22. shut down the welding equipment and remove the workpiece after completion of welding activities	-	1	-	-
<i>Perform post-welding operations</i>	6	11	-	5
PC23. check the work pieces as per the work instructions for product quality	1	2	-	1
PC24. identify various weld defects by conducting visual inspection, destructive and non-destructive tests on the work pieces	2	4	-	2
PC25. separate the defective pieces which can be repaired/ reworked and pieces which are beyond repair	1	1	-	1
PC26. clean and store all the tools, machine and equipment after completion of work	1	2	-	1

PC27. dispose scrap or waste material in accordance with the company policies and environmental regulations	1	1	-	-
PC28. report to the supervisor about any problems faced or anticipated during the complete process	-	1	-	-
NOS Total	30	50	-	20

CSC/N0209: Manually weld metals by using MIG/MAG welding

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for welding operations</i>	15	21	-	7
PC1. identify the work to be done and product specifications by interpreting the product drawing, Welding Procedure Specification (WPS) and job orders	1	2	-	1

PC2. identify the tools, MIG welding machines, measuring instruments, accessories, consumables and input materials (i.e. ferrous metals/materials: carbon steel, stainless steel etc.) as per the requirements mentioned in WPS or drawing	3	2	-	1
PC3. select and arrange the right material, equipment, fixtures, accessories, welding torch and consumables i.e. electrode, filler wire, shielding gas etc. as per the SOP and job requirements	2	3	-	1
PC4. check the input material, tools and equipment for any defects and that they are as per the required quality standards	2	3	-	1
PC5. prepare the work area for welding activities	1	1	-	-
PC6. prepare the materials (i.e. sheet (less than 1.5 mm), plate, structural section, pipe/tube, other forms) and joint for welding process	1	1	-	1
PC7. clean wire feeder and torch tip	-	1	-	-
PC8. set the MIG welding machine and its parameters i.e. wire feed rate, amperage, gas flow rate etc. as per the WPS and SOP	1	2	-	1
PC9. connect and adjust regulators and flow meters to cylinders	1	1	-	-

PC10. choose appropriate mode of metal transfer	1	1	-	-
PC11. set pre-purge with shielding gas as required	1	1	-	1
PC12. install the work pieces and fixture on the apparatus and align them with the electrodes as per the job requirements	1	2	-	-
PC13. verify set up by running test weld on the specimen (scrap plate)	-	1	-	-
<i>Perform MIG/MAG welding operations</i>	8	17	-	8
PC14. follow safety precautions during welding work as per SOP and organizational guidelines	-	1	-	-
PC15. start the MIG welding machine for welding operations	1	2	-	-
PC16. perform MIG welding process in all welding positions as per SOP and tack weld the joint at appropriate intervals to produce joints of the specified quality, dimensions and profile	2	4	-	2
PC17. adjust wire stick-out as per requirement	1	1	-	1

PC18. produce joints of the required quality and of specified dimensional accuracy which achieve a weld quality equivalent to Level C of ISO 5817	1	4	-	2
PC19. ensure correct angle of torch, travel speed, direction of weld and feed during the welding operation	1	1	-	1
PC20. monitor the welding process parameters (air pressure, electrode force, electrode distance, gas flow etc.) are within standards by reading the various gauges and correct them if not within standards	1	1	-	1
PC21. measure the final welded piece and compare with the dimensions as prescribed in the WPS and engineering drawing	1	1	-	1
PC22. remove extra material, slag etc. by using brush, chipping hammers, grinders etc., from the welded piece	-	1	-	-
PC23. shut down the welding equipment and remove the workpiece after completion of welding activities	-	1	-	-

<i>Perform post-welding operations</i>	7	12	-	5
PC24. check the work pieces as per the work instructions for product quality	1	2	-	1
PC25. identify various weld defects by conducting visual inspection, destructive and non-destructive tests on the work pieces	2	3	-	2
PC26. separate the defective pieces which can be repaired/ reworked and pieces which are beyond repair	1	1	-	1
PC27. clean and store all the tools, machine and equipment after completion of work	1	2	-	1
PC28. dispose scrap or waste material in accordance with the company policies and environmental regulations	1	1	-	-
PC29. check the machine operations for any malfunctions/defects in the component and immediately inform the supervisor/maintenance team for correction	1	2	-	-
PC30. report to the supervisor about any problems faced or anticipated during the complete process	-	1	-	-

NOS Total	30	50	-	20
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DGT/VSQ/N0102: Employability Skills (60 Hours)

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values – Citizenship</i>	1	1	-	-
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-

<i>Becoming a Professional in the 21st Century</i>	2	4	-	-
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self- Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-

PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	2	2	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	2	3	-	-
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-

PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	3	4	-	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-
<i>Entrepreneurship</i>	2	3	-	-
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-

PC25. identify sources of funding, anticipate, and mitigate any financial/legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	1	2	-	-
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-

PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	20	30	-	-

Assessment Parameters:

Assessment Plan:

1. Components of Assessment:

- Each subject will be assessed in three components: Theory (40% weightage), Practical (40% weightage), and On-job Training (OJT, 20% weightage).

2. Passing Parameters:

- To pass the semester, students must meet both the assessment parameters given below.

Parameter 1 - Weighted Semester Score:

- Students must achieve a minimum of 60% in the weighted average score across all three components (Theory, Practical, and OJT) for each subject.

Parameter 2 - Individual Component Score:

- Students need to score at least 40% in each individual component (Theory, Practical, and OJT) of every subject.

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

<1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

2. Testing Environment:

- Check the Assessment location, date and time
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

3. Assessment Quality Assurance levels/Framework:

- Question bank is created by the Subject Matter Experts (SME) are verified by the other SME
- Questions are mapped to the specified assessment criteria
- Assessor must be ToA certified & trainer must be ToT Certified

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding

5. Method of verification or validation:

- Surprise visit to the assessment location

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored

On the Job:

1. Each module (which covers the job profile of Stainless-Steel Fabricator) will be assessed separately.
2. The candidate must score 60% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
 - Videos of Trainees during OJT
 -
4. Assessment of each Module will ensure that the candidate is able to:
 - Effective engagement with the customers
 - Understand the working of various tools and equipment
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Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.

Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf